CLAIMS

What is claimed:

1. A method of laser marking an article, comprising:

detecting a position of a focal point of a laser beam on a two-dimensional area;

storing the position; and

directing the laser beam onto a marking surface of an article and moving the focal point relatively across the marking surface, a pattern being marked by the laser on the marking surface being based on both the data set and the reference position.

2. The method of claim 1, further comprising:

moving the detector away from a plane off the focal point; and

positioning the article with the marking surface thereof in the plane.

3. The method of claim 1, further comprising:

calculating a difference between the reference position and a base position, the pattern being marked by the laser being based on the difference.

4. The method of claim 3, further comprising:

modifying the data set with the difference.

5. The method of claim 1, wherein the vector set is modified with the difference.

6. The method of claim 4, wherein the data set includes calibration data for the laser, the difference being used to modify the calibration data.

7. A method of marking an article, comprising:

storing a data set including at least a vector set of a desired substantially two-dimensional pattern;

generating a laser beam;

detecting a focal point of a laser beam with at least one detector that is at a predetermined position relative to a frame;

moving the detector out of a plane of the focal point;

placing an article so that the article is held by a holder that is in a predetermined position relative to the frame so that a marking surface of the article is in the plane; and

directing the laser beam onto the marking surface and moving the focal point freely across the marking surface, the position of the focal point on the marking surface being based on both the data set and the reference position.

8. A laser marker system, comprising:

a frame;

a laser generating a beam with a focal point;

at least one detector mounted to the frame and capable of detecting a reference position of the focal point relative to the frame;

a memory to hold a data set of coordinates of a desired substantially two-dimensional pattern;

a holder mounted to the frame to hold an article with a marking surface thereof in a predetermined position relative to the frame;

directing apparatus to move the focal point relatively across the marking surface; and

control apparatus utilizing both the data set and the reference position to control the directing apparatus and marking of the surface with the laser beam.